Activity in the South African foreign exchange market

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In the past five years central banks have increasingly shown a greater interest in the size, volumes and structures of foreign exchange markets. A better understanding of these markets is important for bank supervision purposes and for effective intervention by monetary authorities in order to promote more stable financial conditions in general. Statistical and other surveys of these markets were also prompted by the increasing international integration of financial markets, and by the widespread use of new financial instruments and techniques.

A first survey of foreign exchange markets on an internationally co-ordinated basis was carried out in March 1986 by the Bank of England, the Federal Reserve Bank of New York, the Bank of Canada and the Bank of Japan. This was followed in April 1989 by a second survey, which was conducted by the central banks of 21 countries. April 1989 was chosen for this purpose because the month of April tends to be characterised by relative exchange rate stability and probably slightly below-normal trading activity.

Although South Africa was not involved in these international efforts to obtain more information in respect of foreign exchange market activities, the South African Reserve Bank has for many years already felt a need for more data on the operations in South Africa's foreign exchange market. In the late 1970s the Reserve Bank initiated a weekly survey on foreign exchange transactions of authorised foreign exchange dealers in South Africa. It was soon realised, however, that the results obtained from this survey were of limited use. In 1985 the Bank employed a firm of consultants to revise the Bank's whole reporting system on foreign exchange market activities. On the basis of the investigation carried out by these consultants, the survey of the Bank was revised completely and improved data have been compiled as from the beginning of 1987.

In this article participants in the foreign exchange market and the general public are supplied with market turnover figures obtained from the current survey, and with a description of the main characteristics of the South African foreign exchange market. The survey conducted by the Reserve Bank on foreign exchange market operations is first described in some detail in the first section of the article. This is followed by descriptions of the size of the market, the growth in turnover, the monthly distribution of turnover, the extent of market concentration, the activities of transactors and the currency composition of transactions. Finally, the article concludes with an analysis of the level and composition of South Africa's foreign exchange reserves.

The survey of the Reserve Bank

As indicated above, the Reserve Bank started collecting weekly information on foreign exchange dealings from authorised dealers during the late 1970s. In the original survey information was collected concerning dealers' foreign exchange holdings, net open positions, deals established and settled, purchases and sales of foreign currency and foreign assets and liabilities. The survey results were never made available to the public and were only of limited use to the Bank because of certain serious shortcomings, namely:

- Reporting was required in terms of rand, and neither the methods of conversion nor the specific exchange rates used in converting foreign currency transactions, liabilities and assets by different authorised exchange dealers were consistent.
- Definitions and terminology used in the returns were not interpreted uniformly by the authorised dealers, making the reported figures unreliable.
- There was inadequate control over the accuracy of information submitted by authorised dealers and some dealers reported data on a net instead of on a gross basis.

In view of these shortcomings, the weekly survey on foreign exchange dealings of the Bank was terminated and replaced by a completely new survey. In late 1986 a new questionnaire on foreign exchange dealings of authorised dealers was drawn up and sent to dealers for completion. Although the reported data initially had various flaws, from the beginning of 1987 the Reserve Bank felt satisfied with the reliability of the information.

The main objective of the new survey was to obtain statistics on the South African foreign exchange market in order to improve the efficiency of intervention operations of the Reserve Bank and the management of the gold and other foreign reserves of the country. At the same time it was felt that the information should be collected in such a way that it would also be useful for banking supervision and exchange control purposes, economic analyses of the foreign exchange market, as well as for the dealing operations of authorised foreign exchange dealers. With this in mind, information requested in the questionnaire was structured in such a way that it corresponded closely with information used by the authorised dealers to manage their own foreign exchange operations.

In the current survey statistics are requested on a daily basis in respect of the currency holdings and dealings in the six main currencies – US dollar, British pound, German mark, Japanese yen, Swiss franc and French franc – from all private authorised dealers and the Reserve Bank. Other currencies were not included in the survey because dealings in them are still insignificant in size. Consolidated returns are submitted by each authorised dealer, i.e. dealings between different departments or local branches of the same authorised dealer are excluded. However, foreign exchange deal-

Table 1 Average daily turnover on the South African foreign exchange market ($ millions)

Period	Net turnover													
	Spot transactions				Forward transactions				Total transactions					Gross turnover
	Local customers	Non-residents	Banking sector	Total	Local customers	Non-residents	Banking sector	Total	Local customers	Non-residents	Banking sector	Grand total		
1987	411	128	625	1 164	240	24	297	562	652	153	922	1 726		2 596
1988	568	171	1 035	1 774	343	37	423	802	910	208	1 457	2 576		3 993
1989	829	227	1 069	2 124	449	38	463	951	1 278	265	1 532	3 075		4 574
1987:Jan ..	367	110	829	1 306	250	23	245	518	617	133	1 074	1 824		2 853
Feb ..	361	110	731	1 203	217	12	266	494	578	122	997	1 697		2 633
Mar ..	449	144	647	1 239	253	24	304	581	701	168	951	1 820		2 785
Apr ..	437	119	729	1 284	245	23	359	628	682	142	1 087	1 911		2 943
May...	394	114	428	936	239	27	219	485	634	141	646	1 421		2 075
Jun ..	428	121	545	1 094	248	45	419	713	676	166	964	1 806		2 753
Jul ...	388	130	584	1 102	209	30	269	515	596	168	853	1 617		2 387
Aug...	322	132	534	988	172	25	230	426	493	157	764	1 414		2 103
Sept..	422	159	476	1 056	254	22	262	538	675	180	738	1 594		2 254
Oct ..	460	150	663	1 273	227	24	377	628	686	174	1 040	1 900		2 827
Nov...	402	124	572	1 098	212	10	256	478	614	135	828	1 577		2 309
Dec...	508	126	759	1 393	361	20	360	740	869	146	1 119	2 134		3 230
1988:Jan ..	483	147	693	1 323	196	49	273	518	678	197	966	1 841		2 813
Feb ..	429	117	673	1 219	260	15	332	607	688	133	1 005	1 826		2 738
Mar ..	547	207	927	1 681	363	32	387	783	910	239	1 314	2 463		3 722
Apr ..	597	167	815	1 578	295	45	371	711	891	212	1 185	2 289		3 423
May...	504	153	1 021	1 678	451	44	535	1 030	955	197	1 557	2 709		4 262
Jun ..	739	241	1 270	2 251	387	50	518	955	1 126	291	1 789	3 206		5 046
Jul ...	559	176	1 427	2 163	329	28	484	842	888	204	1 912	3 004		4 850
Aug...	505	172	1 079	1 755	264	23	370	657	769	195	1 448	2 412		3 806
Sept..	695	165	1 010	1 871	369	51	398	817	1 064	216	1 408	2 688		4 084
Oct ..	497	166	998	1 661	309	27	412	748	806	193	1 410	2 409		3 712
Nov...	629	177	1 338	2 144	391	37	512	939	1 020	213	1 850	3 083		4 888
Dec...	633	163	1 165	1 961	496	42	481	1 019	1 129	205	1 646	2 979		4 575
1989:Jan ..	485	148	882	1 515	286	38	340	665	771	186	1 223	2 180		3 402
Feb ..	715	278	1 102	2 095	462	37	539	1 037	1 177	314	1 641	3 132		4 769
Mar ..	713	290	1 012	2 015	485	40	526	1 050	1 198	329	1 538	3 064		4 541
Apr ..	661	306	786	1 754	339	31	380	751	1 000	337	1 167	2 504		3 618
May...	758	256	1 057	2 072	503	49	515	1 067	1 261	305	1 572	3 138		4 721
Jun ..	960	217	1 274	2 451	544	39	510	1 093	1 504	256	1 784	3 544		5 250
Jul ...	733	316	1 033	2 082	392	35	364	791	1 125	351	1 397	2 873		4 232
Aug...	873	228	1 093	2 194	427	44	447	917	1 300	271	1 540	3 111		4 625
Sept..	1 045	196	1 188	2 430	491	42	493	1 026	1 536	239	1 681	3 456		5 122
Oct ..	1 090	195	1 162	2 448	465	34	518	1 017	1 555	229	1 680	3 464		5 109
Nov...	971	180	1 169	2 320	487	40	452	979	1 458	220	1 622	3 300		4 852
Dec...	941	108	1 065	2 114	508	32	474	1 015	1 449	140	1 540	3 129		4 646
1990:Jan ..	999	173	1 169	2 341	411	45	484	940	1 410	217	1 654	3 281		4 871
Feb ..	1 245	172	1 014	2 432	445	59	484	988	1 690	231	1 498	3 419		4 890
Mar ..	924	170	1 027	2 120	454	35	486	974	1 378	204	1 512	3 094		4 581
Apr ..	1 023	182	994	2 199	439	44	520	1 003	1 462	226	1 514	3 202		4 715
May...	913	173	1 058	2 144	446	47	542	1 034	1 359	219	1 600	3 178		5 100
Jun ..	1 280	156	1 242	2 678	528	36	510	1 073	1 808	192	1 751	3 751		5 384
Jul ...	899	176	905	1 980	398	47	415	860	1 297	223	1 320	2 840		4 143

ings of a domestic head office with its foreign branches are included.

Only foreign currency legs of transactions are reported in the questionnaire. A purchase of dollars for rand is therefore reported as a receipt of dollars. Information on transactions in financial rand and in foreign currency options and futures is excluded from the survey. From September 1988 the Reserve Bank started collecting information on financial rand dealings on a monthly basis from authorised dealers. Dealings in foreign currency options and futures will only be collected from authorised dealers when justified by the volume of these transactions.

The following information is obtained in the current survey:

- Nostro balances, i.e. the net balances on current accounts with foreign banks (correspondent bank accounts).
- Foreign currency outstanding position, which is defined as the net balance of all outstanding foreign exchange purchases and sales in the relevant six currencies, including past dues, balances on settlement suspense accounts and all unmatured contracts. These balances are reported according to currency placements and borrowings by type of transactor.
- Total projected receipts and deliveries on the forward book by trading day for the following seven trading days as well as the remainder of the book.
- Purchases and sales in the six foreign currencies where rand was involved according to type of transaction and counterparty. Deals involving two foreign currencies (so-called third-currency deals) are therefore not reported.
- Foreign currency borrowings and placements according to counterparty.

Most of this information is probably only of use to the Reserve Bank for purposes of executing its daily operations in the foreign exchange market. However, turnover figures may also be of interest to market participants and the public in general. In Table 1 the gross and net average daily turnover figures are shown on a monthly basis from the beginning of 1987 until July 1990. Net turnover figures are also provided for spot and forward transactions classified by type of transactor, i.e. whether the transactions were concluded with local customers, non-residents or other authorised dealers. Gross turnover figures refer to the average daily purchases and sales of authorised dealers and the Reserve Bank established during a specific month, regardless of date of delivery, in the six main currencies already identified in the spot and forward market. Net turnover figures are gross figures adjusted for double-counting arising from local interbank business.

Size of the foreign exchange market

The relative size of the South African foreign exchange market can be determined by comparing the average daily gross and net turnover in this market with the turnover figures of the twenty-one industrial countries as determined in the surveys carried out in April 1989. Unfortunately, these turnover figures are not strictly comparable because of different approaches followed. The Reserve Bank survey excludes spot and forward transactions other than in the six main currencies against the rand, as well as transactions in financial rand, third currencies, currency futures and option contracts. All these types of transactions are included in the turnover figures of the other countries, but they in turn include only one leg of foreign currency swap transactions, whereas both legs are included in South Africa's turnover.

These differences make it difficult to compare the South African market with other markets. The exclusion of financial rand transactions, currency futures and option contracts from South Africa's data does not have any significant effect because of the small volume of these transactions in the domestic market. More important is the exclusion of third-currency transactions which particularly occur in interbank business and which are quite significant. From information obtained from some of the more active foreign exchange dealers it appears that the exclusion of these transactions will to a considerable extent be offset by the inclusion of both legs of foreign currency swap transactions in the data for South Africa. Despite these dif-

Average daily turnover on the South African foreign exchange market

Table 2 Average daily turnover in foreign exchange markets in April 1989[1] ($ billions)

Countries and items	Gross turnover	Net turnover	Net spot turnover
United Kingdom	241	187	(119)
United States	174	129	81
Japan	145	115	46
Switzerland	68	57	30
Singapore	63	55	(31)
Hong Kong	60	49	(30)
Australia	37	30	18
France	32	26	(15)
Canada	18	15	6,1
Netherlands	16	13	7,2
Denmark[2] (90 per cent)	15	13	6,4
Sweden	...[3]	13	9,5
Belgium[2] (90 per cent)	12	10	5,2
Italy[2] (75 per cent)	...[3]	10	7,6
Other countries	55	22	16
Total	936	744	428
Adjustment for cross-border double counting	...	–204	–123
Estimated gaps in reporting	...	100	55
Estimated global turnover	...	640	360
South Africa[1]	4,6	3,1	2,1

Sources: Bank for International Settlements, *60th Annual Report*, Basle, June 1990, p.209; and South African Reserve Bank Survey of Foreign Exchange Market Activities.

Notes: 1 The South African figures are the annual averages of daily figures for 1989 since activity in the South African market in April is usually relatively low.
2 Estimated market coverage is given in brackets.
3 Included in totals for "other countries".

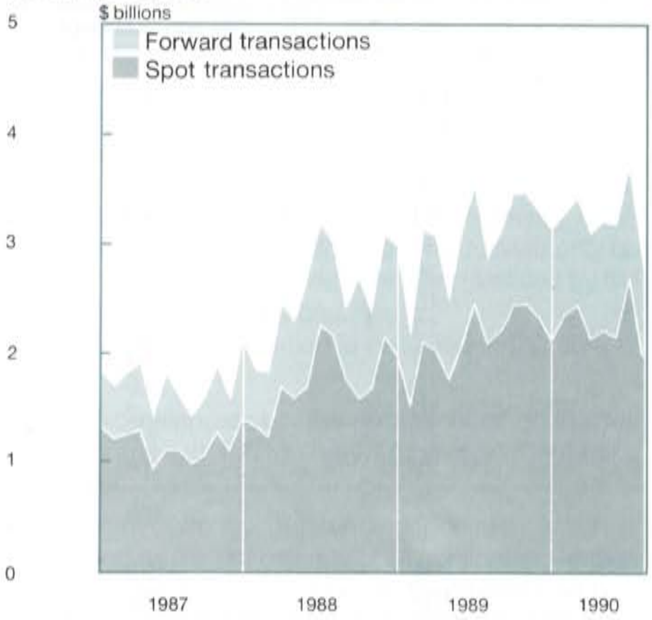
ferences, international comparisons nevertheless provide a useful indication of the relative size of the South African market.

Table 2 shows that the total average daily gross turnover in the domestic foreign exchange markets of the twenty-one central banks which carried out the survey in April 1989 amounted to $936 billion. After correction for double-counting – interbank transactions reported by both banks in the same market but not between markets - the average daily net turnover in all these markets came to $744 billion. From this information the Bank for International Settlements estimated total global average daily net turnover at $640 billion, taking into account cross-border double counting and allowing for transactions in countries not covered by the survey and other gaps in data collection.

According to the Reserve Bank survey, the total net turnover in the South African foreign exchange market amounted to an average daily figure of $3,1 billion in 1989, or to 0,5 per cent of the world total. As could be expected, the South African market is very small compared with the three leading centres in the European, American and Asian time zones – the United Kingdom, the United States of America and Japan – which account for approximately 60 per cent of global trading. The South African market is also relatively small as opposed to more free markets, such as those of Singapore, Hong Kong and Australia, and it amounts to between 20 to 30 per cent of the size of the markets of more industrialised countries such as Canada, the Netherlands, Denmark, Sweden, Belgium and Italy.

It is also interesting to note that the value of net turnover transactions on the South African foreign exchange market is about fifteen times the value of South Africa's exports and imports of goods and services. This ratio is considerably smaller than global exchange trading: global exchange trading was estimated by the Bank for International Settlements to be about forty times larger than world exports of goods and services. This suggests that transactions arising from international capital flows, hedging, arbitrage and position-taking are of much smaller relative significance in South Africa than in the world as a whole and that underlying foreign trade transactions play a far more important role in the South African market than in the larger markets. This conclusion is not surprising in view of the relatively undeveloped foreign exchange market still existing in South Africa, of which the development is moreover hampered by exchange control restrictions as well as by the effect of recent financial sanctions applied against the country.

Average daily net turnover on the South African foreign exchange market



Another salient feature emerging from the table is that net spot transactions in the South African market comprised about 69 per cent of the average daily net turnover in 1989. This seems to coincide with the findings of the Bank for International Settlements, who determined that the ratio of spot to total foreign exchange transactions ranged between 40 and 60 per cent in the major centres but tended to be appreciably higher in smaller markets where exchange control and taxes inhibit or discourage forward, futures and options transactions.[1] However, if it is taken into consideration that spot transactions were defined in a narrow sense by the Bank for International Settlements to exclude the spot leg of swaps and maturing forward contracts while forward transactions include futures and options contracts, it can be concluded that the ratio of spot to total transactions in South Africa is comparatively smaller than the same ratio in other smaller markets. The relatively larger volume of forward transactions in the South African market is probably related to the debt standstill and rescheduling arrangements with foreign creditors combined with the view that the rand had a strong downward potential, which led to a larger proportionate forward covering of the foreign debt.

[1] Bank for International Settlements: *60th Annual Report*, Basle, June 1990, p.210.

Growth in the foreign exchange market

From the first seven months of 1987 to the first seven months of 1990 the average daily net turnover on the South African foreign exchange market increased at an average rate of 23½ per cent per year. This growth of the South African market compares well with the average rate of increase of nearly 30 per cent per year in four countries (Canada, Japan, the United Kingdom and the United States) which collected data in both 1986 and 1989. As in these countries, the foreign exchange transactions in South Africa grew at a substantially more rapid rate than the value of foreign trade. The combined value of the imports and exports of goods and services in South Africa increased at an average annual rate of only 4 per cent from 1987 to 1990; the growth in the foreign exchange market was, therefore, nearly six times as large as the expansion in foreign trade transactions.

The turnover growth in the foreign exchange markets of the above-mentioned four industrialised countries was higher in the countries where international banking business was expanding rapidly. For instance, the annual growth rate of the Japanese market was 34 per cent, against only 16½ per cent in the case of the Canadian market. The performance of the South African foreign exchange market was quite remarkable considering that it was achieved with hardly any significant extension of international banking in the local market during this period. Over and above this factor, large redemptions had to be made on foreign debt, strict exchange control rulings were in force and many countries restricted investments and other capital flows to South Africa.

On the other hand, the South African growth performance was well below that of the Australian foreign exchange market, where net turnover rose at an aver-

Table 3 Percentage growth in the average net daily turnover on the South African foreign exchange market

Period	Spot transactions	Forward transactions	Total transactions
1987 to 1988	52,4	42,7	49,2
1988 to 1989	19,7	18,6	19,4
First seven months of 1989 to first seven months of 1990	14,3	6,5	11,4
Average annual growth from first seven months of 1987 to firtst seven months of 1990	24,9	20,4	23,5

age annual rate of 44 per cent from 1986 to 1989. The substantially more rapid growth of the latter market was largely due to the relative openness of the financial markets of this country, a favourable time zone location and large capital inflows to Australia in order to finance substantial deficits on the current account of their balance of payments.[2]

Moreover, the average daily turnover in the South African foreign exchange market was probably still extremely low in 1987 – the starting-point in the calculation of the average annual growth rate – because of the effect of the standstill arrangements on the repayment of foreign debt and relative exchange rate stability during most of the year. This low level of transactions in 1987, followed by a sharp depreciation of the rand and substantial capital outflows in 1988, was mainly responsible for an increase in the average net daily turnover on the foreign exchange market of slightly more than 49 per cent in that year. In 1989 this substantial growth in activities contracted considerably to only 19½ per cent, despite the substantial increase in the volume of merchandise exports and continued large capital outflows. The growth rate declined further to only 11½ per cent in the first seven months of 1990 compared with the same period in 1989, in a climate of relative exchange rate stability and lower capital outflows.

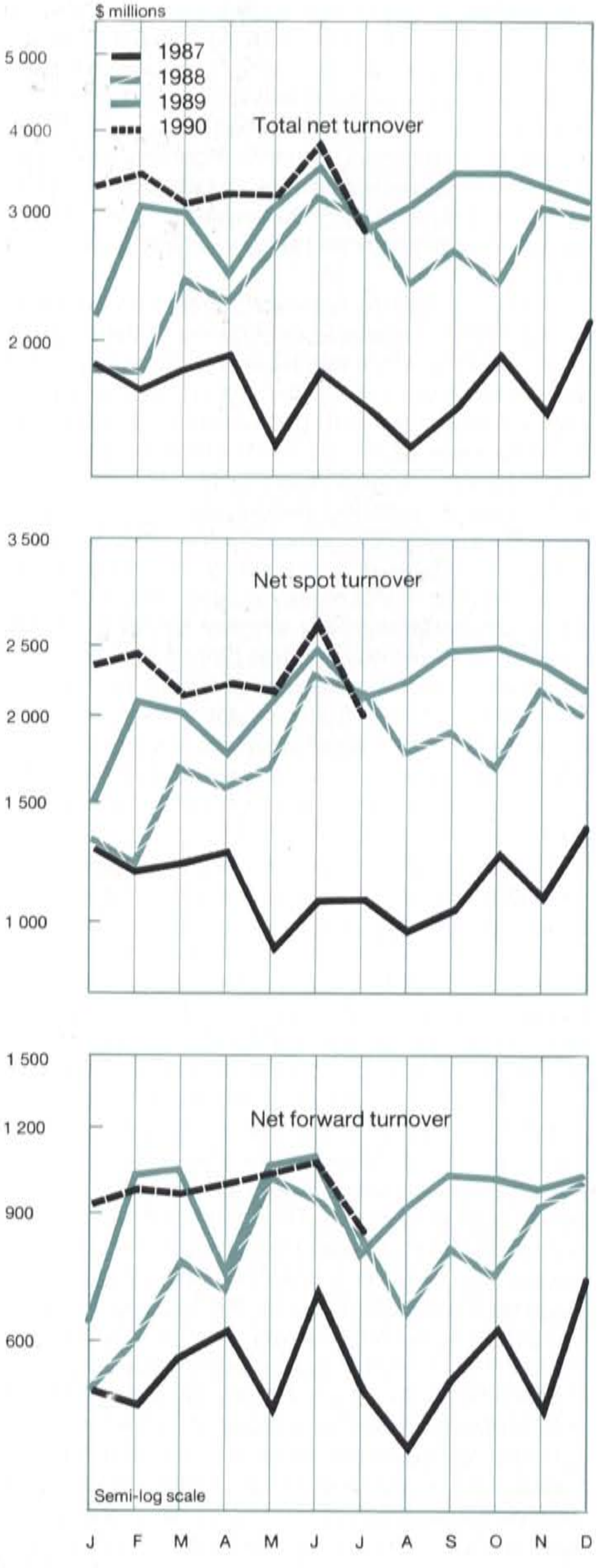
From the information in Table 3 it is also apparent that the average daily turnover in spot transactions grew at a more rapid rate than the forward market. These spot turnover figures, however, include swap transactions arising from forward dealings. It is also interesting to note that forward exchange turnover in the first seven months of 1990 increased at a very low rate of only 6½ per cent compared with the corresponding period of 1989.

Monthly distribution of turnover

The monthly distribution of net turnover in the South African foreign exchange market shows a fairly erratic pattern over the period for which the information has been compiled. Nevertheless, a few deductions can be made from this distribution. Firstly, fluctuations in foreign exchange market turnover correspond closely with the extent of uncertainty and instability of the exchange rate of the rand. During periods of relatively stable conditions in the South African exchange market, the turnover in foreign exchange dealings has remained fairly firm. In periods of uncertainty, sharp fluctuations are discernible in turnover figures. This is clearly illustrated by the relative stability in total turnover figures during 1987 and in the more recent period of exchange rate stability from about October 1989 until the middle of 1990. During 1988 and the first nine months of 1989 the monthly average daily turnover in

[2] Reserve Bank of Australia: "The Australian Foreign Exchange Market", Reserve Bank of Australia *Bulletin*, March 1990, pp.14-15.

Turnover on the South African foreign exchange market



the foreign exchange market showed substantial changes in most of the months.

Secondly, the turnover in spot transactions over most of the survey period was considerably more stable than the turnover in forward transactions, despite the fact that spot transactions arising from swaps were included in total spot turnover. This of course implies that spot turnover excluding swaps would be even smoother from month to month. However, in the period of relative exchange rate stability from October 1989 until the middle of 1990 forward turnover remained remarkably steady and also increased at a very low rate.

Thirdly, no definite seasonal pattern can be determined from the available data owing to the relatively short period for which they have been collected as well as considerable random changes in both current and capital transactions with non-residents. In particular, the data were influenced considerably by leads and lags in foreign payments and receipts, which occurred quite frequently in the period concerned. Despite these fluctuations, the compiled information seems to indicate that turnover on the foreign exchange market rises in the last month of each quarter, which is followed by comparatively lower turnover figures in the first month of the next quarter. This pattern coincides to a large extent with the seasonal pattern in the value of South Africa's foreign trade, except for the fourth quarter, because trade is usually relatively low in December. Interest and other contractual payments to non-residents are normally also fairly high in the last month of each calendar quarter.

Fourthly, June was the one month in which foreign exchange market activity was well above the trend line of the monthly turnover in all the relevant years. In addition to the factors leading to high turnover figures in the last month of each quarter, the June turnover figures were also influenced during 1987 to 1990 by repayments on foreign debt that had to be made in terms of the First and Second Interim Arrangements with foreign creditors, as well as other foreign loan commitments that matured in this month. The pressure that these repayments placed on the level of South Africa's foreign reserves during June was one of the reasons why repayments in the Third Interim Arrangements were shifted from June and December to February and August. It is, however, interesting to note that notwithstanding these commitments, the turnover figures in December were comparatively small, mainly owing to the fact that December is an important holiday season in South Africa during which many factories and other enterprises are closed for a large part of the month.

Finally, as could be expected, the spot turnover transactions resembled these patterns in the total turnover figures much more closely than forward transactions. Spot turnover activities were therefore also higher in the last month of each quarter except in the case of the fourth quarter. In the last three months of the year, the holiday season in December and large dividend payments that become payable in November, resulted in higher November turnover values in two out of the three relevant years. Average monthly forward turnover values fluctuated considerably during most of the period and no definite conclusions regarding its monthly turnover distribution can as yet be made.

Market concentration

The South African foreign exchange market is not only relatively small in comparison with the markets of industrialised countries, but is also highly concentrated. In the Reserve Bank survey it was found that of the gross turnover of 21 authorised dealers in South Africa, the turnover of eight dealers accounted for no less than 80 per cent of the total value of transactions in 1989. Moreover, the five most active foreign exchange dealers were responsible for 64 per cent of total gross turnover. These ratios remained fairly constant over the whole period in which the survey was carried out.

In contrast to this highly concentrated market, the Bank of England found that the London foreign exchange market was somewhat more widely dispersed. Ten of the 356 principals participating in the Bank of England's survey held a combined share of some 35 per cent of the overall market. As could be expected in an international market, foreign institutions also play an important role in London, accounting for 80 per cent of the turnover in April 1989[3], whereas they are, of course, relatively unimportant in the South African market. The South African market is also more highly concentrated than the Australian market, where the top ten dealers were responsible for about 60 per cent of market turnover in April 1989.[4]

Activities of market participants

Based on the global survey undertaken in April 1987 the Bank for International Settlements estimated that over three-quarters of net reported transactions in foreign exchange markets took place between banks and other dealers located either at home or abroad.[5] Unfortunately, data on transactions between South African authorised exchange dealers and non-resident banks are not collected separately in the Reserve Bank's survey. From the information obtained, however, the proportion of interbank to total business was estimated to amount at the most to about 57 per cent in 1989, i.e. well below the global average.

The global survey also revealed that centres which conduct substantial international banking business, such as those in the United Kingdom, Singapore and Hong Kong, have much higher ratios of interbank deal-

3 Bank of England: "The market in foreign exchange in London," Bank of England *Quarterly Bulletin*, March 1990, p.535.

4 Reserve Bank of Australia: *op cit*, p.17.

5 Bank for International Settlements: *op cit*, p.210.

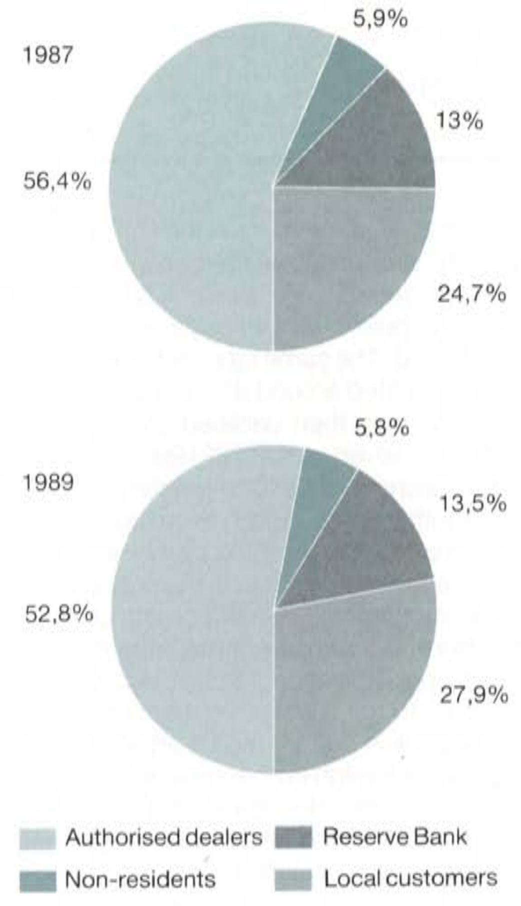
ings than other centres with less international banking business, such as those in Japan, Canada and Australia. But the interbank business in this latter group of countries was also considerably larger than that of South Africa. In Canada the ratio of interbank to total business amounted to 70 per cent, in Australia to 73 per cent and in Japan to 68 per cent in April 1989. Moreover, this proportion was even higher in countries with smaller foreign exchange markets, such as the Netherlands (89 per cent), Denmark (91 per cent) and Italy (88 per cent).

In particular the transactions between South African domestic authorised exchange dealers and non-resident banks were indeed very insignificant in comparison with the rest of the world. The proportion of international banking business to total net turnover in South Africa was estimated to have amounted to 7 per cent in 1989, against more than 50 per cent for Australia as well as Canada. In the smaller markets this ratio was even higher at approximately two-thirds of total net turnover.[6] The extremely small proportion of international banking business in South Africa was perhaps partly due to the country's exceptional position in the international financial community during the 1980s. The comparatively highly regulated domestic exchange market was probably also not conducive to the promotion of international banking business. More importantly, however, it could also be ascribed to the fact that third-currency dealings were not included in the turnover figures of South Africa, but are included in those of the other countries. In making this comparison of international banking business the exclusion of third-currency transactions will not, of course, be offset by the inclusion of both legs of swap transactions in the South African data since they would mainly form part of domestic interbank business.

These factors, especially the latter, were probably also responsible for the comparatively high proportion of domestic interbank business in the South African foreign exchange market. In 1989 domestic interbank to total net transactions in South Africa amounted to almost 50 per cent, as against a global average of approximately 25 per cent. Similarly, the ratio of transactions with local customers to total net turnover in South Africa amounted to the high level of nearly 42 per cent in 1989, compared to a global average of only about 15 per cent.

In comparing the relative turnover of each type of transactor it is, however, important to bear in mind that business with final customers generates a large part of the turnover in the interbank market. Transactions with non-bank customers have a multiplier effect, seeing that they may leave authorised dealers with unwanted or non-permissible exposures and – especially in a nervous market – a series of interbank transactions may have to be undertaken before all positions are

Participants in the South African foreign exchange market



voluntarily held or are within the limits prescribed by the authorities. Moreover, outright forward orders of customers are normally executed by authorised dealers by means of swaps. For example, a forward sale of dollars to a client will in many cases result in three other transactions (a spot purchase of dollars, a spot sale of dollars and a forward purchase of dollars). These other transactions are included in the turnover figures of the survey, and would most likely appear as interbank transactions. This type of dealing makes it increasingly difficult to divide customers' foreign exchange dealings into those connected with commercial operations and those that are of a financial nature.

It is also interesting to note from Table 4 that the relative share of market participants changed quite significantly over the period for which the survey has been conducted. From 1987 until the first seven months of 1990 the relative share of business with local customers increased mainly at the expense of interbank business. The proportion of net turnover with local customers to total turnover rose from just below 38 per cent in 1987

6 Bank for International Settlements: *op cit*, p.209.

Table 4 Net foreign exchange market turnover by main participants – %

Participants	1987	1988	1989	First seven months of 1989	First seven months of 1990
Local customers	37,7	35,3	41,6	39,3	45,7
Non-residents	8,9	8,1	8,6	10,2	6,6
Domestic interbank	53,4	56,6	49,8	50,5	47,6
Total	100,0	100,0	100,0	100,0	100,0

to approximately 46 per cent in the first seven months of 1990. The proportion of interbank business to total net turnover declined from nearly 53½ per cent in 1987 to just below 48 per cent in the first seven months of 1990. The same ratio for business with non-residents fluctuated around 8½ per cent in the period 1987 to 1989 and then declined sharply to 6½ per cent in the first seven months of 1990.

Another prominent feature concerning the participants in South Africa's foreign exchange market is the large and important role played by the Reserve Bank in the foreign exchange market. In the period 1987 to the first seven months of 1990 the gross turnover of the Reserve Bank in the market amounted on average to about 12½ per cent of aggregate gross turnover.

In contrast to the situation in most other countries, the central bank in South Africa is an active participant in the country's foreign exchange market. The Reserve Bank not only concludes transactions at its own discretion, but also at the initiative of foreign exchange dealers. Particularly until the end of 1988 the Reserve Bank was actively involved in balancing the spot and forward demand and supply of dollars because of its responsibility for the marketing of South Africa's gold production for which it paid the gold mines in rand.[7] In view of these rand payments for gold proceeds the spot sales of authorised dealers normally exceeded their spot purchases, with the result that the Reserve Bank had to sell spot dollars to obtain a more balanced supply of dollars. From 8 December 1988 the Bank started paying the gold mines in dollars for their gold production, which resulted in a more automatically balanced spot market.

Despite various attempts to improve operations in the forward market, the Reserve Bank has maintained its role as "market-maker" in the forward market. The Bank has continued to act as a "forward coverer in last resort" and carries, for the account of the Treasury, the full exposure in the forward market. The Bank also establishes (in a discretionary way) the margins between spot and forward rates for various maturities. As a result of the Bank's role as market-maker and the structure of the South African market, the Reserve Bank's sales of forward contracts have normally been considerably larger than its purchases of forward exchange in the 1980s. These nearly continuous net forward sales of the Reserve Bank were aggravated by the fact that only a small proportion of gold sales – South Africa's main export – is covered forward; a one-sided view usually exists in a thin market about expected exchange rate movements which in the 1980s have generally favoured a depreciation of the rand; and the standstill arrangements led to increased covering of foreign loans.

Owing to the continuous and uncontrolled interactions between the spot and forward markets, the Bank's dominant role in the forward market also affects the spot market. In view of the increasing importance of swap transactions used as a means of covering forward operations, and since the Bank is normally a net seller of forward exchange, these swap transactions have led to a considerable increase in the Bank's purchases of spot dollars.

The Bank also continues to intervene regularly in the spot foreign exchange market to influence developments in the market directly. In these intervention operations the Bank is influenced in particular by the following intermediate objectives:

> "Firstly, the Bank sees it as its proper function to smooth out unduly large short-term fluctuations in the exchange rate, especially when they are of a temporary and reversible nature. This can happen in particular in the South African market when singularly large transactions have to be executed.
>
> Secondly, the Bank at times has to enter the market as a buyer of foreign exchange in order to fund its own positions. In view of the Bank's continued involvement in the forward exchange market it often has a need for foreign exchange which can only be acquired from the market-place.
>
> Thirdly, the Bank likes to stay in contact with the market and therefore to be present in the market at all times, even if it does little intervention on balance.
>
> Fourthly, the Bank realises how closely its foreign exchange operations are linked to its operations in the domestic money market and, at times, uses its intervention in the foreign exchange market to sup-

7 For a short period from September 1983 to the end of January 1985 the mining industry was paid in US dollars for gold sold to the Reserve Bank, and from February 1985 to the beginning of December 1985 the Bank paid half in rand and half in dollars.

plement simultaneous actions in the money market."[8]

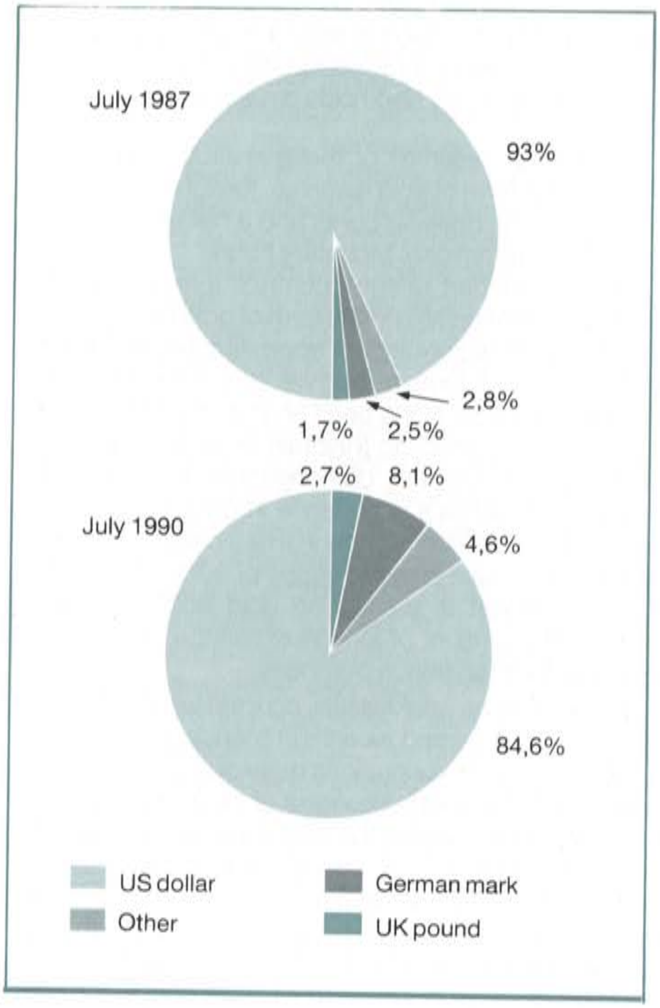
In accordance with most of the foreign exchange markets in industrialised countries, foreign exchange brokers also play an important role in the South African foreign exchange market. Only four foreign exchange brokers operate in the South African market, but market sources believe that they arrange somewhere between 15 to 30 per cent of the turnover where rand is involved in the transactions. Their dealings in third currencies probably constitute a considerably higher proportion of total turnover in the market. The transactions arranged through brokers average about 40 per cent in the larger markets (United States 44 per cent; United Kingdom 45 per cent; Canada 40 per cent; Australia 33 per cent; and France 42 per cent).[9]

Currency composition of turnover

From the Reserve Bank's survey it was determined that in July 1990 nearly 85 per cent of the average daily net turnover in foreign exchange dealings with rand on the one side and the six distinguished currencies on the other side represented transactions between the US dollar and the rand. Although the dollar has remained by far the most important currency in foreign exchange dealings, its relative share in total net rand turnover has declined from 93 per cent in July 1987. This decline in the share of dollar transactions occurred because of more rapid increases in transactions between the rand with the German mark, British pound, Swiss franc and Japanese yen. In particular, the ratio of transactions in German mark to total net rand turnover increased sharply from 2,5 per cent in July 1987 to 8,1 per cent in July 1990, making the mark the second most important currency in the South African market. The German mark was followed by the British pound with 2,7 per cent and the Swiss franc and Japanese yen both with 2,1 per cent of turnover in July 1990. Transactions between the French franc and the rand accounted for only 0,3 per cent of total net rand turnover in July 1990. More or less the same relative currency distribution occurred in both spot and forward transactions, but the percentage share of the dollar in the forward market was moderately higher than in the spot market.

The Bank for International Settlements found that the US dollar was by far the most important currency in the global market and it was involved in roughly 90 per cent of all deals concluded.[10] In most of the markets transactions between the dollar and the local currency were, however, significantly smaller than in the South African market. In Italy, for example, the dollar accounted for nearly 61 per cent of all foreign exchange transactions against Italian lira.[11] In Tokyo as much as 72 per cent of the year's overall turnover was related to business with the US dollar, while in London the ratio amounted to only 27 per cent for business between dollar and pound sterling.[12]

Currency composition of net turnover



Composition and level of foreign reserves

South Africa's gold and other foreign reserves are held mainly by the South African Reserve Bank. From 1939 exchange control regulations have limited private banking institutions' holdings of foreign reserves largely to working balances held abroad for normal operational purposes. In 1979 these limits were increased considerably with a view to developing foreign exchange market activity. Since then the Reserve Bank has con-

8 C.L. Stals: "The role of the central bank in the foreign exchange market," *Address at the ACI Junior Seminar*, Johannesburg, 18 February 1985, pp. 13-14.

9 Reserve Bank of Australia: *op cit*, p. 15.

10 Bank for International Settlements: *op cit*, p. 210.

11 Banca d'Italia: "Turnover on the Foreign Exchange Market," Banca d'Italia *Economic Bulletin*, February 1990, p. 54.

12 Bank of England: *op cit*, p. 533.

tinued to set limits on the maximum permissible foreign exchange holdings of banking institutions, which at present total $474 million for all banks taken together. In addition, the banks have rand-denominated short-term foreign assets in neighbouring countries forming part of total foreign reserves. The central government normally also holds small working balances abroad.

The foreign reserves of these institutions are held mainly in the form of gold reserves, foreign currency reserves, special drawing rights and a net reserve position in the International Monetary Fund.

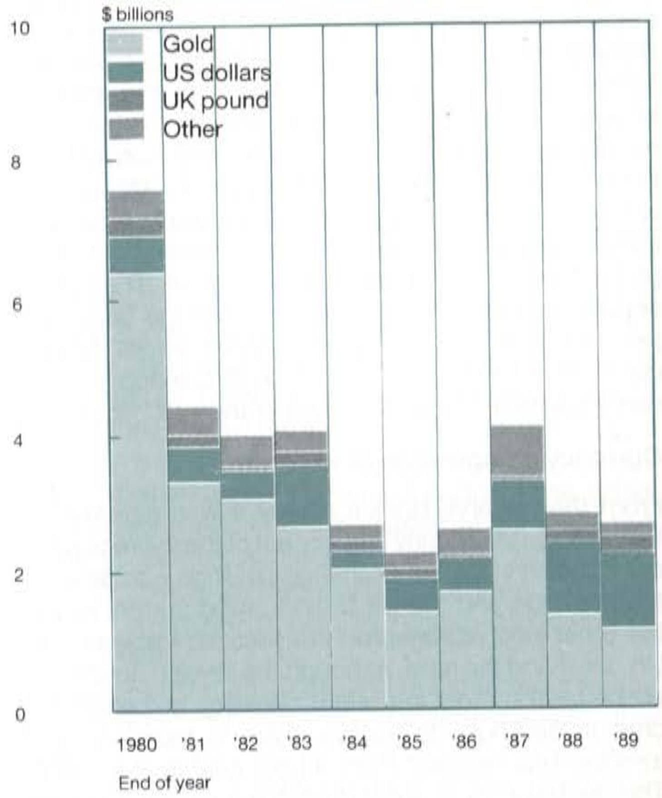
The largest part of the country's foreign reserves has normally been held in the form of gold reserves. On average, gold accounted for approximately two-thirds of the country's foreign reserves during the last three decades. It has all along been an important element of the authorities' policy to maintain large gold holdings, *inter alia*, because this demonstrates to the outside world South Africa's confidence in gold. Gold is also less prone to political actions in that it need not be held abroad. The main disadvantages of such a policy are that no interest is earned on gold holdings and it restricts the amount of foreign exchange immediately available for intervention purposes.

In view of these weaknesses, coupled with the serious problems encountered recently in financing foreign debt repayments and expectations regarding gold price developments, the gold component of the foreign reserves has been reduced over the past three years. Gold reserves as a ratio of total foreign reserves, for instance, fell back from 65,2 per cent at the end of 1986 to 62,6 per cent at the end of 1987, before dropping further to 47,7 per cent at the end of 1988. This proportion then declined moderately further to 41,9 per cent at the end of 1989 and then rose again to 47,9 per cent on 31 July 1990.

Over the same period a more or less opposing increase was recorded in the proportion of foreign reserves held in the form of foreign currency holdings, i.e. mainly demand deposits and call money at foreign financial institutions, investments in Treasury bills and securities of foreign governments, and other relatively liquid investments in foreign currency assets. As could be expected, this increase occurred largely in the dollar-denominated foreign assets of the country. Owing to the important role of the dollar as an international reserve currency and the large proportion of South Africa's imports, exports and financial flows with the rest of the world denominated in dollars, South Africa's foreign reserve holdings were held mainly in the form of dollar assets. The proportion of dollar-denominated foreign reserve holdings to total currency holdings has even increased further recently from 57 per cent at the end of 1986 to nearly 72 per cent at the end of 1989.

Over the same period the proportion of foreign reserve holdings denominated in pound sterling in relation to total foreign currency reserves rose from 4 to 16 per cent, with the result that these two currency-denominated assets comprised 88 per cent of reserve currency holdings at the end of 1989. The relative increase in the holdings of dollar and pound sterling occurred at the expense of nearly all other currencies, except exchange assets denominated in German mark which rose moderately.

Composition of South Africa's gross foreign reserves



At times the Reserve Bank also held fairly large amounts of special drawing rights as part of its foreign reserve holdings. As a participant in the Special Drawing Rights Department of the International Monetary Fund, South Africa has been allocated special drawing rights amounting to SDR 220,4 million. However, South Africa has never held the total allocation in its foreign reserves. The highest special drawing rights holdings were recorded at the end of March 1982 and amounted to R135 million. These holdings then declined rapidly to R40 million at the end of 1983, subsequently remaining at a low level.

Finally, South Africa's net reserve position in the International Monetary Fund, i.e. its so-called reserve and super reserve tranche position in the International Monetary Fund, also forms part of the gold and other foreign reserves of the country. The reserve tranche position is an automatic drawing right that members of the International Monetary Fund obtain in terms of the stipulation in the Fund's Articles of Agreement that members have to pay 25 per cent of their subscriptions in the Fund in the form of special drawing rights or other members' currencies that are acceptable to the Fund. A super reserve tranche position arises when a member's currency is designated in the provision of credit to other members and when it already holds 25 per cent of its subscriptions in special drawing rights and other members' currencies. In view of the liquidity problems experienced by South Africa in recent years, South Africa drew the remaining credit balance on this facility in December 1985.

Despite surpluses recorded on the current account of the balance of payments, which amounted to a total of R26,1 billion from the beginning of 1985 to the second quarter of 1990, the net capital outflow not related to reserves of R29,1 billion was responsible for the low level of the gold and other foreign reserves throughout this 5½-year period. Whereas the total gold and other foreign reserves had fluctuated between 2 to 2½ months' total imports of goods and services during the first five years of the 1980s, they declined to levels ranging from 1,3 to 2 months' total imports in the next five years. At the end of July 1990 the gross gold and other foreign reserves had reached a level equal to only 5 weeks' imports of goods and services. However, a substantial improvement in the overall balance of payments, resulted in an increase in the *net* gold and other foreign reserves of no less than R1,1 billion over the first seven months of 1990, clearly indicating that the authorities preferred to repay reserve-related liablities rather than building up the *gross* foreign reserves of the country.

No dogmatic statement can be made in respect of the optimum level of a country's gold and other foreign reserves; depending on economic circumstances and many other factors, this level may in any case change over time. The optimum size of a country's reserves is positively correlated with the extent of the authorities' intervention in the foreign exchange market. However, countries with large credit facilities to finance balance of payments deficits have less need for large foreign exchange holdings than countries with restricted financing facilities and sharply fluctuating transactions with the rest of the world.

Since the early 1970s South Africa's balance of payments has been characterised by substantial swings owing to factors such as fluctuations in gold and other international commodity prices, leads and lags in foreign payments and receipts and socio-political developments. In view of this increased instability, the country now needs large holdings of gold and other foreign reserves for effective intervention purposes if it wants to maintain a system of managed floating. This need is enhanced by the fact that South Africa has to continue making net repayments on foreign debt which may also vary in intensity over different periods in conjunction with the restricted availability of foreign credit facilities to finance balance of payments deficits.

Conclusion

In a survey by the Reserve Bank on operations in the South African foreign exchange market it was determined that the average daily net turnover in transactions where rand is involved amounted to $3,1 billion in 1989, or to an estimated ½ per cent of net global exchange turnover. Spot transactions accounted for about 69 per cent of this turnover, but because these transactions were defined in a wide sense to include the spot leg of swaps and maturing forwards, this ratio is small in comparison with other smaller foreign exchange markets. The relatively larger volume of forward transactions in the South African market is probably related to the debt standstill combined with the general view in the late 1980s that the rand had a strong downward potential, which led to increased forward covering of foreign debt. Not only is the South African market relatively small, but it is also highly concentrated in the sense that a few dealers were responsible for the bulk of the transactions.

The average annual growth rate of 23½ per cent in net foreign exchange turnover from the first seven months of 1987 to the first seven months of 1990 compares fairly favourably with other foreign exchange markets where the volume of international banking business is relatively small. The growth rate of the turnover on South Africa's foreign exchange market was also six times higher than the expansion in the country's foreign trade transactions, indicating that financial transactions in the market increased at a rapid rate. This performance of the South African market is quite remarkable, because it was achieved in a highly regulated environment, with hardly any significant increase in international banking business and with restrictions placed on capital flows to South Africa by many other countries.

Although the monthly distribution of foreign exchange market turnover had a fairly erratic pattern over the survey period, fluctuations corresponded closely with the extent of uncertainty and instability of the exchange rate of the rand. Moreover, spot transactions were considerably more stable than the turnover in forward transactions. Unfortunately the survey period is as yet too short to determine any definite seasonal pattern. Nevertheless, the available information indicates that the turnover on the foreign exchange market is normally relatively high in the last month and relatively low in the first month of each quarter. In particular, the June turnover figures were always well above the trend line of the monthly turnover in all the relevant years.

Interbank foreign exchange business was found to be comparatively low in South Africa as against the global average. This was largely due to the fact that third-currency dealings are not included in the Reserve Bank's survey, and to the highly regulated domestic market and the country's exceptional position in the international financial community. The Reserve Bank's survey, which is restricted to rand dealings against six main currencies, indicates that these transactions occur mainly in the form of interbank business and between authorised dealers and domestic customers.

Another important feature of the participants in the South African market is the large and active role of the Reserve Bank. In the period from the beginning of 1987 to the end of July 1990 the gross turnover of the Reserve Bank averaged approximately 12½ per cent of total gross turnover. For a large part of this period the Reserve Bank was actively involved in balancing the spot and forward market, it maintained its role as "market-maker" in the forward market and continued to intervene regularly in the market to smooth out unduly large short-term fluctuations in the exchange rate.

In accordance with most other markets, foreign exchange brokers also perform an important function in the South African market because of their intimate knowledge of and other links with international markets. In addition, they make unobtrusive intervention by the Reserve Bank possible.

The United States dollar is by far the most important currency in dealings against the rand and represented nearly 85 per cent of such transactions in July 1990. In the past three years the share of German mark transactions in total net turnover more than tripled to slightly above 8 per cent in July 1990. The British pound, Swiss franc and Japanese yen are the other important currencies in foreign exchange dealings against the rand.

The greater part of South Africa's foreign reserves is held in the form of gold reserves, but the gold component has been reduced drastically from about 65 per cent of total foreign reserves at the end of 1986 to 48 per cent on 31 July 1990. An opposite increase was recorded in the relative share of foreign exchange holdings, which are held predominantly in dollar-denominated assets. The level of the gold and other foreign reserves at the end of July 1990 was precariously low at only five weeks' imports of goods and services.